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Contributions to the spider fauna of Turkey: *Arctosa lutetiana* (Simon, 1876), *Aulonia albimana* (Walckenaer, 1805), *Lycosa singoriensis* (Laxmann, 1770) and *Pirata latitans* (Blackwall, 1841) (Araneae: Lycosidae)

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Abstract

This paper reports four lycosid species as new records for the Turkish araneo-fauna. The characteristic features and egigynum drawings of *Arctosa lutetiana* (Simon, 1876), *Aulonia albimana* (Walckenaer, 1805), *Lycosa singoriensis* (Laxmann, 1770) and *Pirata latitans* (Blackwall, 1841) (Lycosidae: Araneae) are included. Habitat and geographical distribution of the species are presented. The specimens were collected from different locations of Turkey.

Keywords: Spiders, Araneae, Lycosidae, Taxonomy, New records, Turkey.

Introduction

The wolf spiders, Lycosidae, are real hunters that live in a wide variety of terrestrial habitats. Their general appearance varies among genera and they usually have a high frontally narrowed and relatively elongated prosoma. They have eight eyes arranged in three rows. Four small eyes are located above the clypeus, two large eyes above them are looking forwards, and farther back there are also two big eyes that look upwards. Posterior median and lateral eyes are arranged in a trapezium. Therefore, lycosids can look in four directions and have excellent eyesight. Their legs and chelicerae are generally robust.

A total of 63 species grouped in 11 genera were recorded from Turkey (Topçu *et al.*, 2005). There are some ecological studies on lycosids in Turkey (Bayram, 1993, 1994a, 1994b, 1995a, 1995b, 1995c, 1996, 1997, 2000; Bayram & Luff, 1993a, 1993b; Bayram & Varol, 2001; Bayram *et al.*, 2002; Varol & Bayram, 1995). In Turkey,

7 species of *Arctosa* (i.e. *A. cinerea*, *fulvolineata*, *leopardus*, *perita*, *personata*, *simoni* and *variana*), 4 species of *Lycosa* (i.e. *L. narbonensis*, *piochardi*, *praegrandis* and *tarantula*), 2 species of *Pirata* (i.e. *P. hygrophilus* and *piraticus*), and *Aulonia kratochvili* are recorded until now (Bayram, 2002; Topçu *et al.*, 2005; Varol *et al.*, 2007).

Material and Methods

The present study is based on the material deposited in the collection of the Arachnological Museum of Kırıkkale University (KUAM). Only four females were examined in this study. The specimens were preserved in 70% ethanol. The identification and drawings were made by means of a SMZ10A Nikon stereomicroscope with a camera lucida. The keys of Heimer & Nentwig (1991), Roberts (1995) and Tyschchenko (1971) were used. All measurements are in millimetres.

Results

1. *Arctosa lutetiana* (Simon, 1876)

Material examined: 1♀, Yahşihan (39°50'N 33°30'E, Kırıkkale prov.), 23.IX.2006, from a meadow in the University campus.

Description: Prosoma dark olive brown, laterals have 3-4 grey spots, anteriorly clearly wider than the eye region. Median stripe on prosoma light colour but indistinct. Chelicerae hairy and have three teeth on the basal segments. Anterior median eyes bigger than anterior lateral eyes. Distance between posterior lateral eyes larger than anterior lateral eyes. Legs reddish brown, have many hairs, grey spotted or annulated. Coxae and femora yellowish brown. Tibiae III-IV with only one dorsal spine. Tarsus I with a long bristle proximally. Opisthosoma greenish-brown, with black hairs. Folium furnished anteriorly with a heart shaped white band, posteriorly with 4-5 triangular white spots, and laterally with two yellowish spots.

Female (KUAM-LYC.Arc.lute.01): Body length 7.5; carapace length 3.3; leg I: coxa 0.99, trochanter 0.24, femur 2.11, patella 1.01, tibia 1.45, metatarsus 1.43, tarsus 0.96. Epigynum: Fig. 1a.

World Distribution: Sweden, Middle Europe, South Europe, Russia (Heimer & Nentwig, 1991, Platnick, 2007).

2. *Aulonia albimana* (Walckenaer, 1805)

Material examined: 1♀, Perşembe (41°05'N 37°50'E, Ordu prov.), 25.VII.1995, from a cultivated hazelnut (*Corylus avellana* L.) garden.

Description: Prosoma dark brown, with thin white lines at margins, anteriorly narrow, hardly wider than eye region. Rear half of carapace with thin golden brown median line. The head region projects rather than thorax region. Pedipalps black, but palpal patella white. Opisthosoma blackish-brown, with white median line anteriorly, and white spots posteriorly. Legs bright brown but femora I black.

Female (KUAM-LYC.Aul.albi.01): Body length 3.5; carapace length 1.45 mm; leg I: coxa 0.99, trochanter 0.24, femur 1.29, patella 0.57, tibia 1.18, metatarsus 1.01, tarsus 0.68. Epigynum: Fig. 1b.

World Distribution: Palaearctic region; widespread in northern Europe, but commoner in the south of the region (Roberts, 1995; Platnick, 2007).

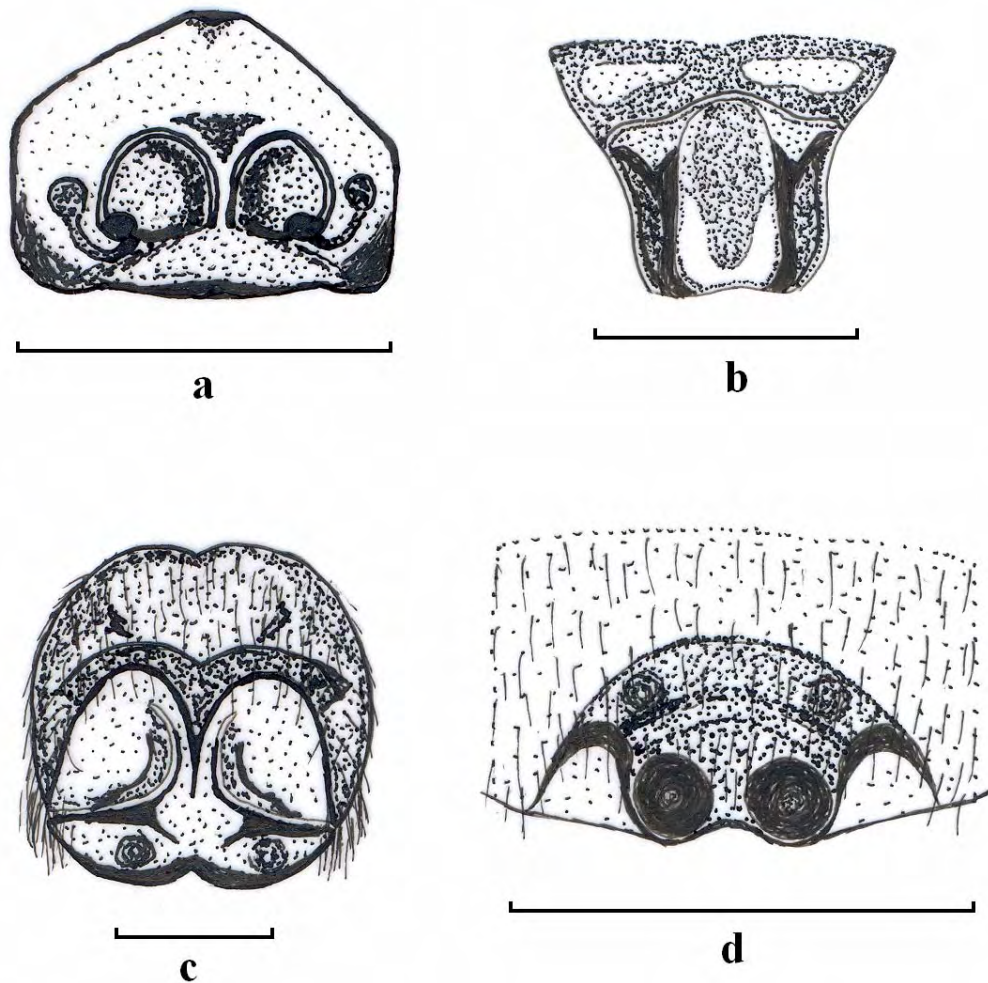


Fig. 1. Female epigynum (ventral view) of: a. *Arctosa lutetiana*, b. *Aulonia albimana*, c. *Lycosa singoriensis*, and d. *Pirata latitans*. Scale = 0.5 mm.

3. *Lycosa singoriensis* (Laxmann, 1770)

Material examined: 1♀, Edremit (38°25'N 43°17'E, Van prov.), 14.VI.1995, from a steppe far 1 km from Van Lake.

Description: Prosoma olive brown. In female, basal segments of chelicerae and pedipalps yellowish brown or orange-brown. Median stripe on prosoma bright, small and indistinct, with two dark longitudinal patterns. Laterals of carapace with many radially scattered black bands or spots. Sternum entirely black. Fovea visible. Cephalic region higher than thoracic region. Distance between posterior lateral eyes larger than between anterior lateral eyes. Surroundings of anterior lateral eyes dark. Chelicerae hairy. Legs thick and strong, greyish olive brown. Legs black spotted or annulated, hairy, with dorsal spines. Trochanters ventrally black. Opisthosoma dark olive brown. Folium anteriorly with black pattern, medially often with undulated indistinct dorsal band with white spots, posteriorly with some horizontal white lines. Ventral side of opisthosoma dark.

Female (KUAM-LYC.Lyc.sing.01): Body length 24; carapace length 14; leg I: coxa 4.5, trochanter 1.5, femur 9.5, patella 3.5, tibia 6.5, metatarsus 6, tarsus 4. Epigynum: Fig. 1c.
World Distribution: Palaearctic region: Central Europe, Eastern Europe, Russia, Kazakhstan (Zyuzin, 1985; Platnick, 2007).

4. *Pirata latitans* (Blackwall, 1841)

Material examined: 1♀, Çaykara (40°40'N 40°20'E, Trabzon prov.), 22.VII.1995, from a beech (*Fagus orientalis* Lipsky) forest.

Description: Prosoma dark brown or black, anteriorly not clearly wider than eye region. Carapace with a median dark V-shaped mark, but this mark is indistinct due to dark colouration. Lateral sides of carapace with white longitudinal bands. Cephalic region narrow, higher than thoracic region. Distance between posterior lateral eyes larger than between anterior lateral eyes. Legs dark brown. Femora I darker than other femora. Opisthosoma almost uniformly dark brown, but rear half of opisthosoma with paired white spots and some indistinct light bands along the sides.

Female (KUAM-LYC.Pir.lati.01): Body length 5; carapace length 2.04; leg I: coxa 0.57, trochanter 0.26, femur 1.36, patella 0.7, tibia 1.16, metatarsus 1.03, tarsus 0.81. Epigynum: Fig. 1d.

World Distribution: Europe to Azerbaijan (Platnick, 2007).

References

- Bayram, A. 1993. *Ecological studies on wolf spiders (Lycosidae, Araneae) in a mixed agricultural situation*. Doctoral Thesis, University of Newcastle upon Tyne, England, U.K., 275pp.
- Bayram, A. 1994a. The arthropod fauna of grass tussocks on agricultural field margins. *Yuzuncu Yil University, J. Fac. Agric.*, 4: 139-149.
- Bayram, A. 1994b. Effects of food consumption on growth and reproduction of *Pardosa pullata* (Clerck) (Lycosidae, Araneae). *Yuzuncu Yil University, J. Sci.*, 5, 5: 41-50.
- Bayram, A. 1995a. Nocturnal activity of *Trochosa ruricola* (De Geer) and *T. terricola* Thorell (Lycosidae, Araneae) sampled by the time-sorting pitfall trap. *Commun. Fac. Sci. Univ. Ank. Series C.*, 13: 1-11.
- Bayram, A. 1995b. Diurnal activity of *Alopecosa pulverulenta* (Clerck, 1757) (Lycosidae, Araneae). *Commun. Fac. Sci. Univ. Ank. Series C.*, 13: 13-20.
- Bayram, A., 1995c. Reproduction of a wolf spider *Pardosa pullata* (Clerck) (Araneae, Lycosidae) in the field. *2nd Congress for National Ecology and Environment*, 11-13 Sept, Ankara, Turkey. pp. 50-59.
- Bayram, A. 1996. A study on the diel activity of *Pardosa* spiders (Araneae, Lycosidae) sampled by the time-sorting pitfall trap in different habitats. *Turk. J. Zool.*, 20: 381-387.
- Bayram, A. 1997. Determination of the diel activity in wolf spider *Pardosa pullata* (Clerck) (Lycosidae, Araneae). *1st Congress for National Kızılırmak on Sciences*, 14-16 May, Kırıkkale, Turkey. 238-248.
- Bayram, A. 2000. A study of egg production in three species of wolf spiders (Araneae, Lycosidae) *Pardosa amentata*, *P. palustris* and *P. pullata* in the field. *Israel J. Zool.*, 46(4): 297-303.

- Bayram, A. 2002. Distribution of Turkish spiders. In: Demirsoy, A., ed. *Zoogeography of Turkey*. Meteksan Publ., Ankara, 1005pp.
- Bayram, A., Luff, M.L. 1993a. Cold hardiness of wolf spiders (Lycosidae, Araneae) with particular reference to *Pardosa pullata* (Clerck). *J. Therm. Biol.*, 18(4): 263-268.
- Bayram, A., Luff, M.L. 1993b. Winter abundance and diversity of lycosids (Lycosidae, Araneae) and other spiders in grass tussocks in a field margin. *Pedobiol.*, 37: 357-364.
- Bayram, A., Varol, M.I. 2001. Determination of the seasonal activity by pitfall traps in groundliving spiders (Araneae). *Ekoloji*, 10: 38, 3-8.
- Bayram, A., Özdağ, S. & Kaya, R. 2002. New spider (Araneae) records for Turkey: *Hyptiotes paradoxus* (C.L.Koch, 1834) (Uloboridae), *Diaea pictilis* (Banks, 1896) (Thomisidae), *Alopecosa fabrilis* (Clerck, 1757) (Lycosidae) and *Evarcha arcuata* (Clerck, 1757) (Salticidae). *Israel J. Zool.*, 48(3): 250-251.
- Heimer, S. & Nentwig, W. 1991. *Spinnen Mitteleuropas*. Verlag Paul Parey, Berlin, 543pp.
- Platnick, N.I. 2007. *The world spider catalog*, version 7.5. American Museum of Natural History, online at <http://research.amnh.org/entomology/spiders/catalog/index.html>
- Roberts, M.J. 1995. Collins Field Guide: *Spiders of Britain and Northern Europe*. London, Harper-Collins Publishers, 447pp.
- Topçu, A., Demir, H. & Seyyar, O. 2005. A checklist of the spiders of Turkey. *Serket*, 9(4): 109-140.
- Tyschchenko, V.P. 1971. Identification Key to Spiders of the European USSR. *Opred Faune USSR*, 105, Leningrad, 281pp.
- Varol, M.I & Bayram A. 1995. Determination of seasonal activity by the time-sorting traps in wolf and ground spiders (Araneae: Lycosidae, Gnaphosidae). *2nd Congress for National Ecology and Environment*, 11-13 Sept, Ankara, Turkey. pp. 77-90.
- Varol, İ., Akan, Z., Özdemir, A., Kutbay, F. & Özaslan, M. 2007. The spider *Aulonia kratochvili* (Araneae: Lycosidae) new to the Turkish fauna. *J. Biol. Sci.*, 7(2): 448-450.
- Zyuzin, A.A. 1985. Generic and subfamilial criteria in the systematics of the spider family Lycosidae (Aranei), with the description of a new genus and two new subfamilies. *Proceedings of the Zoological Institute*, USSR Academy of Science, Leningrad, 139: 41-51.

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**Three linyphiid species new to the Turkish araneo-fauna:
Cresmatoneta mutinensis (Canestrini, 1868), *Ostearius
melanopygius* (O.P.-Cambridge, 1879) and *Trematocephalus
cristatus* (Wider, 1834) (Araneae: Linyphiidae)**

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Abstract

The characteristic features and genitalia drawings of *Cresmatoneta mutinensis* (Canestrini, 1868), *Ostearius melanopygius* (O.P.-Cambridge, 1879) and *Trematocephalus cristatus* (Wider, 1834) (Araneae: Linyphiidae), which are new records to the spider fauna of Turkey, are presented, in addition to the habitat and geographical distribution of the species. The specimens were collected from different parts of Turkey.

Keywords: Spiders, Araneae, Linyphiidae, Taxonomy, New records, Turkey.

Introduction

Linyphiids constitute the most crowded family of spiders. They are generally small in body size. These ecribellate, sheet-web weavers are mostly found on trees and bushes, among lower branches, under fallen leaves, in cellars, caves and cracks of rocks. A total of 56 species grouped into 38 genera are known from Turkey (Bayram, 2002; Topçu *et al.*, 2005). Some taxonomical and ecological articles were published on Turkish spiders during the last two decades (Bayram, 1993, 1996, 2000; Bayram *et al.*, 2000, 2002; Bayram & Göven, 2001; Bayram & Özdağ, 2002; Bayram & Ünal, 2002; Bayram & Varol, 2000, 2003). However, there are no study on the linyphiids of Turkey.

In this study, *Cresmatoneta mutinensis* (Canestrini, 1868), *Ostearius melanopygius* (O.P.-Cambridge, 1879) and *Trematocephalus cristatus* (Wider, 1834) (Araneae: Linyphiidae) are newly recorded from Turkey and the characteristic features and genitalia drawings of the three species are presented. Also, habitat and geographical distribution of the species are included.

Material and Methods

The present study is based on the material deposited in the collection of the Arachnological Museum of Kırıkkale University (KUAM). Five specimens were collected from Giresun, Trabzon and Rize provinces located in the Eastern Black Sea Region in 1995. These specimens were taken from a hazelnut (*Corylus avellana* L.) garden, a cabbage (*Brassica oleracea* L.) field surrounded by blackberry (*Rubus* sp.) and beech (*Fagus orientalis* Lipsky) trees, a hornbeam (*Carpinus betulus* L.) and a beech forest. One specimen was taken from a greenhouse of cucumber (*Cucumis sativus* L.) in the Western Mediterranean Region in 2005.

The specimens were preserved in 70% ethanol. The identification and genitalia drawings were made by means of a SMZ10A Nikon stereomicroscope with a camera lucida. The keys of Heimer & Nentwig (1991), Roberts (1995) and Tyschchenko (1971) were used. All measurements are in millimetres.

Results

1. *Cresmatoneta mutinensis* (Canestrini, 1868)

Material examined: 1♀, Değirmendere (41°00'N 39°40'E, Trabzon prov.), 15.VII.1995, from a hornbeam forest; 1♀, Piraziz (40°56'N 38°28'E, Giresun prov.), 22.VII.1995, from a cultivated hazelnut garden.

Description: Prosoma light or orange brown, not clearly wider than ocular area. Cephalic region projects more than thoracic region. Carapace has no patterns but with scattered short prickles. Anterior median eyes smaller and darker than the others. Anterior lateral eyes adjacent to posterior lateral eyes. Distance between anterior median eyes larger than that of posterior median eyes. Chelicerae have the same colour of prosoma, relatively big and long. Sternum entirely brownish. Rear of the prosoma narrowed, with a slender pedicel. Legs yellowish, without spotted nor annulated pattern. Leg I is the longest. All legs very thin and weak, patellae of legs swollen. Opisthosoma olive brown and relatively small. Folium medially often with three dispersed black spots, laterally with three short white stripes and longitudinal black pattern.

Female (KUAM-LIN.Cre.muti.01): Body length 2.7; leg I: coxa 0.26, trochanter 0.13, femur 1.60, patella 0.22, tibia 1.65, metatarsus 1.29, tarsus 0.70. Epigynum: Fig. 1a.

World Distribution: Palaearctic region (Heimer & Nentwig, 1991; Platnick, 2007).

2. *Ostearius melanopygius* (O.P.-Cambridge, 1879)

Material examined: 1♀, Fındıklı (41°12'N 41°16'E, Rize prov.), 21.VII.1995, found on ground in a beech forest; 1♂, Finike (36°10'N 30°15'E, Antalya prov.), 30.VI.2005, from a greenhouse of cucumber.

Description: Anterior lateral eyes adjacent to posterior lateral eyes. Anterior median eyes are smaller than the others which are equal in size. Distance between posterior median eyes larger than that of anterior median eyes. Prosoma dark brown. Chelicerae and sternum brown. Opisthosoma brownish while its tip and spinnerets black. All legs brownish. No spots nor annulation patterns on the legs. Epigynum is distinctive (Fig. 1b).

Female (KUAM-LIN.Ost.mela.01): Body length 2.2; leg I: coxa 0.28, trochanter 0.11, femur 0.99, patella 0.26, tibia 0.88, metatarsus 0.79, tarsus 0.59.

Male (KUAM-LIN.Ost.mela.02): Body length 2.0; leg I: coxa 0.37, trochanter 0.17, femur 1.23, patella 0.30, tibia 1.16, metatarsus 1.01, tarsus 0.63. Palpal organ: Fig. 1c.

World Distribution: Cosmopolitan (Heimer & Nentwig, 1991; Platnick, 2007).

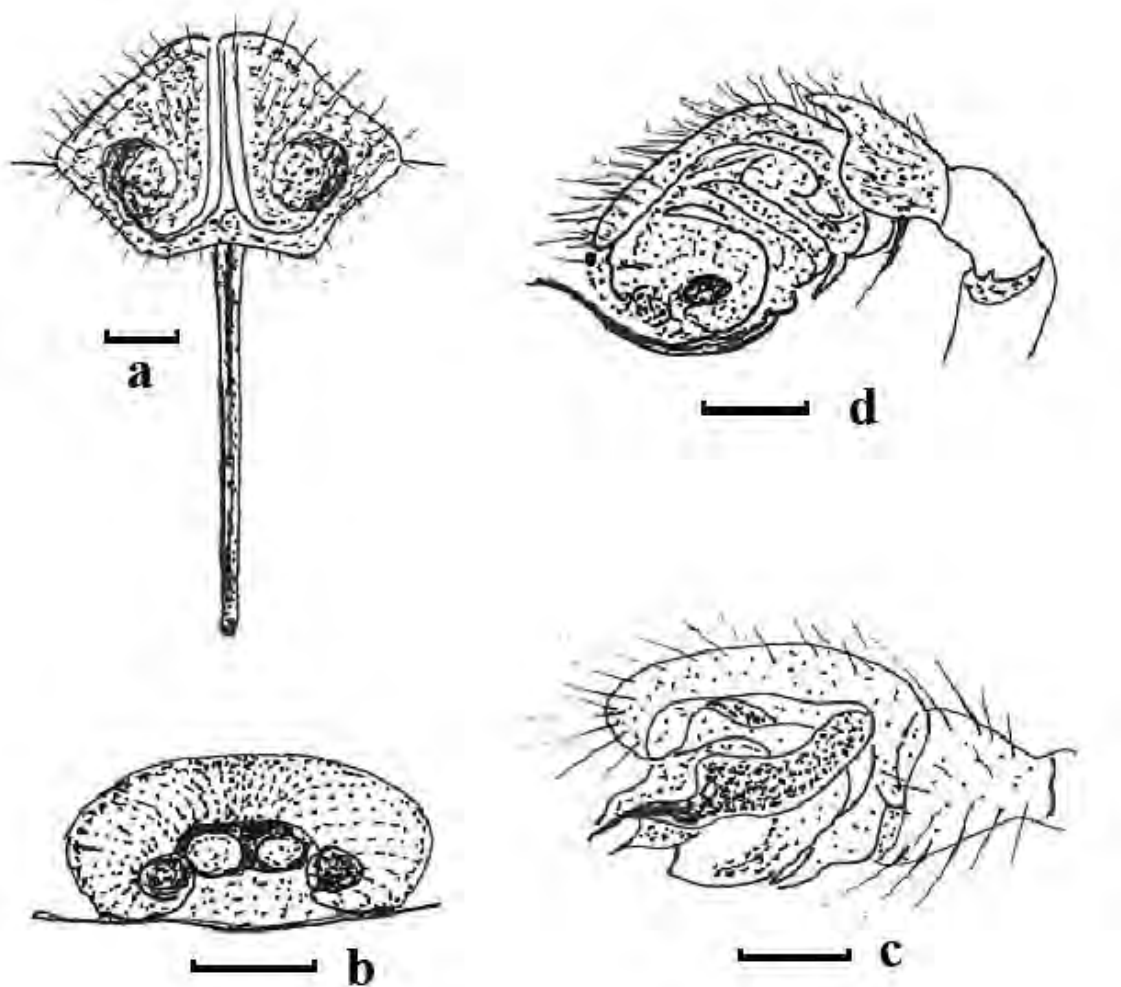


Fig. 1. Female epigynum (ventral view) of: a. *Cresmatoneta mutinensis* and b. *Ostearius melanopygius*. Male palpal organ of: c. *Ostearius melanopygius* and d. *Trematocephalus cristatus*. Scale = 0.5 mm.

3. *Trematocephalus cristatus* (Wider, 1834)

Material examined: 2♂♂, Vakfikebir (41°02'N 39°18'E, Trabzon prov.), 15.VII.1995, found on ground in a cabbage field.

Description: This species has a very distinctive appearance. The high anterior part of the prosoma has a hole with eyes placed on an ocular area in front of it. Ocular area dark brown or black colour. Median eyes quadrangle is widest posteriorly and wider than long. Carapace and sternum yellowish brown. Colour of opisthosoma is the same as ocular area. No patterns on opisthosoma. Tibia, metatarsi and tarsi black.

Male (KUAM-LIN.Tre.cris.02): Body length 2.1; leg I: coxa 0.17, trochanter 0.11, femur 0.63, patella 0.15, tibia 0.61, metatarsus 0.50, tarsus 0.24. Palpal organ: Fig. 1d.

World Distribution: Palaearctic region (Heimer & Nentwig, 1991; Platnick, 2007).

References

- Bayram, A. 1993. *Ecological studies on wolf spiders (Lycosidae, Araneae) in a mixed agricultural situation*. Doctoral Thesis, University of Newcastle upon Tyne, England, U.K., 275pp.
- Bayram, A. 1996. A study on the diel activity of *Pardosa* spiders (Araneae, Lycosidae) sampled by the time-sorting pitfall trap in different habitats. *Turk. J. Zool.*, 20: 381-387.
- Bayram, A. 2000. A study of egg production in three species of wolf spiders (Araneae, Lycosidae) *Pardosa amentata*, *P. palustris* and *P. pullata* in the field. *Israel J. Zool.*, 46(4): 297-303.
- Bayram, A. 2002. Distribution of Turkish spiders. In: Demirsoy, A., ed. *Zoogeography of Turkey*. Meteksan Publ., Ankara, 1005pp.
- Bayram, A. & Göven, M.A. 2001. *Uloborus walckenaerius* Latreille, 1806 (Araneae, Uloboridae), a spider new to Turkish fauna. *Turk J. Zool.*, 25: 241-243.
- Bayram, A. & Özdağ, S. 2002. *Micrommata virescens* (Clerck, 1757), a new species for the spider fauna of Turkey (Araneae, Sparassidae). *Turk. J. Zool.*, 26: 305-307.
- Bayram, A. & Ünal, M. 2002. A new record for the Turkish spider fauna: *Cyclosa conica* Pallas (Araneae, Araneidae). *Turk. J. Zool.*, 26: 173-175.
- Bayram, A. & Varol, M.I. 2000. Spiders active on snow in eastern Turkey. *Zoology in the Middle East*, 21: 133-137.
- Bayram A. & Varol, M.İ. 2003. On *Poecilochroa variana*, recently collected in Turkey for the first time (Araneae: Gnaphosidae). *Zoology in the Middle East.*, 30: 101-104.
- Bayram, A., Özdağ, S. & Kaya, R. 2002. New spider (Araneae) records for Turkey: *Hyptiotes paradoxus* (C.L.Koch, 1834) (Uloboridae), *Diaea pictilis* (Banks, 1896) (Thomisidae), *Alopecosa fabrilis* (Clerck, 1757) (Lycosidae) and *Evarcha arcuata* (Clerck, 1757) (Salticidae). *Israel J. Zool.*, 48(3): 250-251.
- Bayram, A., Varol, M.I. & Tozan, I.H. 2000. The spider (Araneae) fauna of the cotton fields located in the western part of Turkey. *Serket*, 6(4): 105-114.
- Heimer, S. & Nentwig, W. 1991. *Spinnen Mitteleuropas*. Verlag Paul Parey, Berlin, 543pp.
- Platnick, N.I. 2007. *The world spider catalog*, version 7.5. American Museum of Natural History, online at <http://research.amnh.org/entomology/spiders/catalog/index.html>
- Roberts, M.J. 1995. Collins Field Guide: *Spiders of Britain and Northern Europe*. London, Harper-Collins Publishers, 447pp.
- Topçu, A., Demir, H. & Seyyar, O. 2005. A checklist of the spiders of Turkey. *Serket*, 9(4): 109-140.
- Tyschchenko, V.P. 1971. Identification Key to Spiders of the European USSR. *Opred Faune USSR*, 105, Leningrad, 281pp.

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A contribution to the crab spider fauna of Turkey (Araneae: Thomisidae)

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Abstract

The spider species *Ebrechtella tricuspidata* (Fabricius, 1775) and *Tmarus stellio* Simon, 1875 of family Thomisidae are recorded from Turkey for the first time. The characteristic features of these species are described and illustrated, and data on their distribution are included.

Keywords: Spiders, Araneae, Thomisidae, *Ebrechtella*, *Tmarus*, New records, Turkey.

Introduction

The great diversity of form and colour shown by the Thomisidae relates to their exploitation of a wide variety of habitats and their often remarkable capacity for camouflage, sometimes even to the extent of slowly changing colour. The majority of species are rather crab-like in appearance, have the first two pairs of legs longer than the rest, and can walk sideways, as well as forwards and backwards (Roberts, 1995).

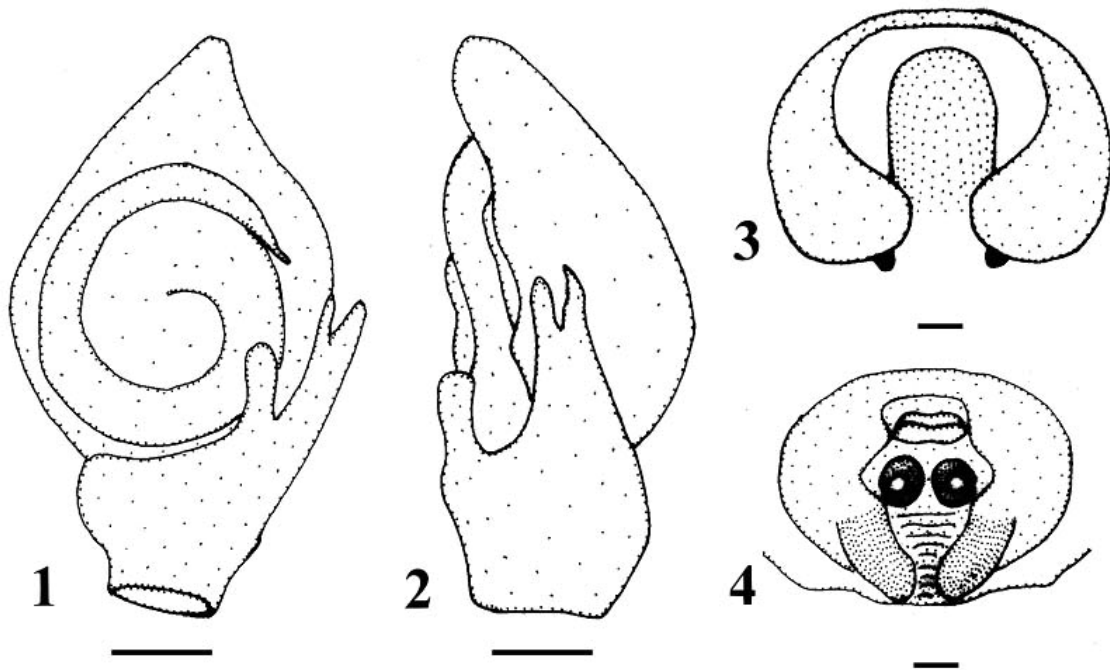
As the fauna of Turkey is concerned, Thomisidae must be regarded as an insufficiently studied family. The thomisid fauna of Turkey consists of 66 species and has recently been a subject of intensive taxonomic and faunistic studies (Karol, 1966a, 1966b, 1966c, 1968; Assi, 1986; Wunderlich, 1995; Bayram *et al.*, 2002, 2007; Topçu & Demir, 2004; Marusik *et al.*, 2005; Logunov & Demir, 2006; Demir *et al.*, 2006).

Misumenops tricuspidatus (*Aranea tricuspidata* Fabricius, 1775) was transferred to genus *Ebrechtella* Dahl, 1907 by Lehtinen (2005). Males of *Ebrechtella* further differ from the males of *Misumenops* F.O.P.-Cambridge, 1900 by their simple (not screwed or

otherwise modified) tegulum, simple curved embolus and distally pointed or obtuse ITA (i.e. intermediate palpal apophysis). The embolus tip is finely striated and the large orifice of the ejaculatory duct is situated subdistally (Lehtinen, 2005).

The species of *Tmarus* Simon, 1875 are small to medium-sized spiders, characterized by the shape of the carapace and abdomen. The abdomen often has a tubercle caudo-dorsally which resembles a leaf bud or scar. They live mainly on plants and rest with their bodies and legs pressed against the substratum (Dippenaar-Schoeman, 1985).

Ten species that are belonging to genus *Ebrechtella* and 212 species of genus *Tmarus* have been described through the world (Platnick, 2007). So far, no member of both genera has been recorded from Turkey (Topçu *et al.*, 2005) except the most recent record of *Tmarus piochardi* (Simon, 1866) by Bayram *et al.* (2007). Here, *Ebrechtella tricuspidata* (Fabricius, 1775) and *Tmarus stellio* Simon, 1875 are recorded for the first time from Turkey. Some of their characteristic features are described and illustrated.



Figs. 1-3: *Ebrechtella tricuspidata* (Fabricius, 1775). 1-2. Left male palp, 1. ventral view, 2. retrolateral view. 3. Female epigynum, ventral view. 4. *Tmarus stellio* Simon, 1875, spermathecae, dorsal view. Scale bar = 0.1 mm.

Material and Methods

Most of the specimens were collected in different parts of Turkey by sweeping on plants. The specimens were preserved in 70% ethanol. The present study is based on material deposited in the collections of the Arachnology Museum of Niğde University

(NUAM). All illustrations were made with a Nikon SMZ-U stereomicroscope with drawing tube. Male palp was mounted using a double sided tape on the SEM stubs, coated with gold in a Polaron SC 502 Sputter Coater, and examined with a JOEL JSM 5600 Scanning Electron microscope at 15 kw. All measurements are in millimetres.

Results

Ebrechtella tricuspidata (Fabricius, 1775)

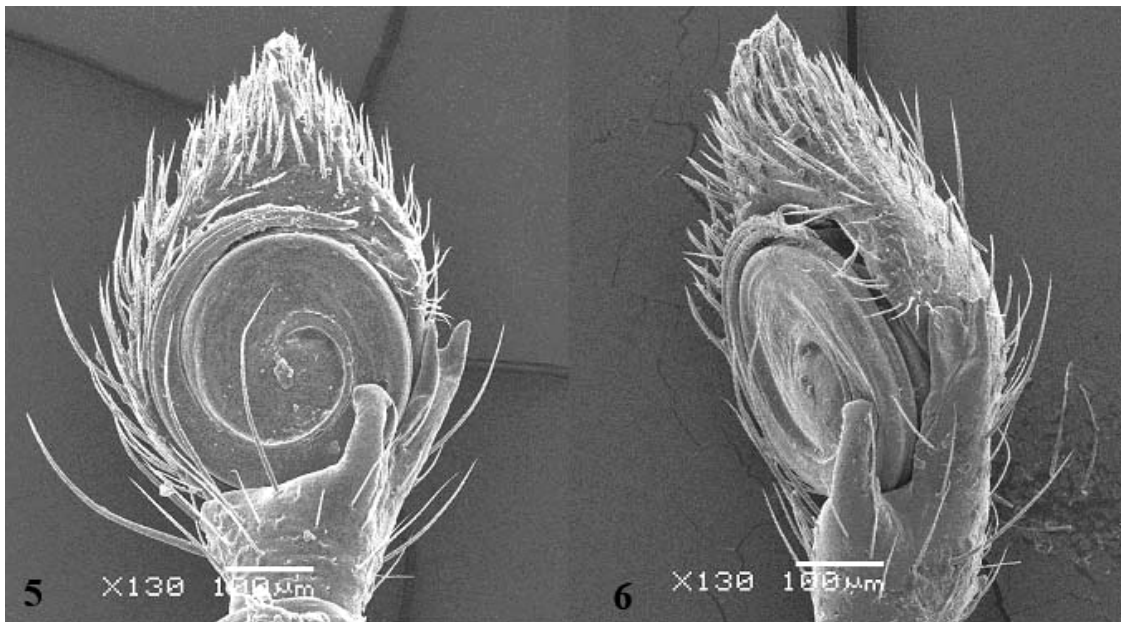
Identification reference: Lehtinen (2005).

Material examined: Turkey: 2♂ 2♀juv. (NUAM), Çankırı province, Ilgaz district, Yenice, 22.09.2004; 1♂ 2♀juv. (NUAM), Ankara province, Kalecik district 04.09.2003; 1♀ 1♀juv. (NUAM), Ankara province, Şereflikoçhisar district, İnebeyli village, 28.05.2003; 2♀ (NUAM), Ankara province, Bala district, Acıöz village, 21.06.2003; 1♀ (NUAM), Yozgat province, Akdağmadeni, Oluközü village, 20.07.2005.

Description: Male. Carapace: 1.38-1.42 long, 1.60-1.62 wide; abdomen: 2.13-2.18 long, 1.50-1.78 wide. Carapace red-brownish, ocular area yellow. Abdomen very light coloured, dorsally with silvery coloured mottles, ventrally cream coloured. Legs yellow. Palpal organ: Figs. 1-2, 5-6.

Female. Carapace: 2-2.06 long, 2.07-2.16 wide; abdomen: 4-4.1 long, 3.20-3.37 wide. Colouration as in male, carapace and abdomen yellow coloured. Epigynum: Fig. 3.

World Distribution: Palaearctic (Platnick, 2007). From south-west Europe (rare) through the whole of Palaearctic Asia to Korea and Taiwan. This species appears more abundant in the eastern part of its range (Lehtinen, 2005).



Figs. 5-6: *Ebrechtella tricuspidata* (Fabricius, 1775), left male palp, 5. ventral view, 6. retrolateral view.

Tmarus stellio Simon, 1875

Identification references: Simon (1932), Logunov (1992).

Material examined: Turkey: 1♀ (NUAM), Ankara province, Kızılcahamam district, 17.06.2003.

Description. Female. Carapace: 1.80 long, 1.75 wide; abdomen: 3.73 long, 3.15 wide. Carapace as wide as long, brown to greyish white, cephalic area mottled with white, ocular area white. Abdomen longer than wide, yellowish white to grey, mottled with brown, ventrally pale yellow, abdominal tubercle small. Legs cream to yellow, spotted with brown. Spermathecae: Fig. 4.

World Distribution: Palaearctic (Platnick, 2007).

Conclusion

With this study, the number of thomisid spiders in Turkey has increased from 66 species that belong to 13 genera to 68 species belonging to 14 genera. The morphometric measurements and other characteristic features of these species are not different from those of European specimens of the same species.

References

- Assi, F. 1986. Note faunistique sur les Thomisidae et les Philodromidae du Liban (Araneae). *Revue Arachnologique*, 7: 41–46.
- Bayram, A., Özdağ, S. & Kaya, R. 2002. New spider (Araneae) records for Turkey: *Hyptiotes paradoxus* (C.L.Koch, 1834) (Uloboridae), *Diaea pictilis* (Banks, 1896) (Thomisidae), *Alopecosa fabrilis* (Clerck, 1757) (Lycosidae) and *Evarcha arcuata* (Clerck, 1757) (Salticidae). *Israel Journal of Zoology*, 48(3): 250–251.
- Bayram, A., Danişman, T., Bolu, H. & Özgen, İ. 2007. Two records new for the Turkish Araneofauna: *Tmarus piochardi* (Simon, 1866) and *Monaeses israeliensis* Levy, 1973 (Araneae: Thomisidae). *Munis Entomology & Zoology*, 2(1): 129–136.
- Demir, H., Topçu, A. & Türkeş, T. 2006. A new species of the genus *Xysticus* C.L. Koch from Turkey (Araneae: Thomisidae). *Zootaxa*, 1364: 45–49.
- Dippenaar-Schoeman, A.S. 1985. The crab-spiders of southern Africa (Araneae: Thomisidae). 5. The genus *Tmarus* Simon, 1875. *Phytophylactica*, 17: 115–128.
- Karol, S. 1966a. Description d'une araignée nouvelle en Turquie (Araneae, Thomisidae). *Communications de la Faculté des Sciences de l'Université d'Ankara*, 11(C): 1–5.
- Karol, S. 1966b. Sur une nouvelle espèce du genre *Xysticus* (Araneae, Thomisidae) en Turquie. *Communications de la Faculté des Sciences de l'Université d'Ankara*, 11(C), 7–9.
- Karol, S. 1966c. Spiders of Ankara and environs with a description of a new species *Xysticus turcicus* (Araneae, Thomisidae). *Communications de la Faculté des Sciences de l'Université d'Ankara*, 11(C): 15–32.

- Karol, S. 1968. Description de deux espèces nouvelles de Thomisidae (Araneae) de Turquie. *Bulletion du Museum National d'Histoire Naturelle, Paris*, 39: 908-911.
- Lehtinen, P.T. 2005. Taxonomic notes on the Misumenini (Araneae: Thomisidae: Thomisinae), primarily from the Palaearctic and Oriental regions. In: Logunov, D.V. & Penney, D. (eds.), *European Arachnology 2003 (Proceedings of the 21st European Colloquium of Arachnology, St.-Petersburg, 4-9 August 2003)*. *Arthropoda Selecta, Special Issue 1*: 147-184.
- Logunov, D.V. 1992. A review of the spider genus *Tmarus* Simon, 1875 (Araneae, Thomisidae) in the USSR fauna, with a description of new species. *Siberian biol. J.* (1): 61-73.
- Logunov, D.V. & Demir, H. 2006. Further faunistic notes on *Cozyptila* and *Xysticus* from Turkey (Araneae, Thomisidae). *Arachnologische Mitteilungen*, 31: 40-45.
- Marusik, Y.M., Lehtinen, P.T. & Kovblyuk, M.M. 2005. *Cozyptila*, a new genus of crab spiders (Aranei: Thomisidae: Thomisinae: Coriarachnini) from the western Palaearctic. *Arthropoda Selecta*, 13(3): 151-163.
- Platnick, N.I. 2007. *The world spider catalog*, version 7.5. American Museum of Natural History, online at <http://research.amnh.org/entomology/spiders/catalog/index.html>
- Roberts, M.J. 1995. Collins Field Guide: *Spiders of Britain and Northern Europe*. London, Harper-Collins Publishers, 447pp.
- Simon, E. 1932. *Les arachnides de France. Synopsis générale et catalogue des espèces françaises de l'ordre des Araneae. Tome sixième, quatrième partie*. Encyclopédie Roret, Paris, 6(4): 773-978.
- Topçu, A. & Demir, H. 2004. New crab spider (Araneae: Thomisidae) records for Turkey. *Israel Journal of Zoology*, 50: 421-422.
- Topçu, A., Demir, H. & Seyyar, O. 2005. A checklist of the spiders of Turkey. *Serket*, 9(4): 109-140.
- Wunderlich, J. 1995. Zur Kenntnis west-paläarktischer Arten der Gattungen *Psammitis* Menge 1875, *Xysticus* C.L. Koch 1835 und *Ozyptila* Simon 1864 (Arachnida: Araneae: Thomisidae). *Beiträge zur Araneologie*, 4: 749-774.

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Scorpions of Kilis Province, Turkey (Arachnida: Scorpiones)

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Abstract

This study is based upon the material of the field studies in Kilis Province, which is located in the southeastern part of Turkey and has not previously studied in detail. In this work, between 7th April and 29th July 2006, a total of 60 scorpion specimens were collected and 7 species belonging to 6 genera and 3 families were studied. They belong to five species of family Buthidae (*Androctonus crassicauda*, *Compsobuthus matthiesseni*, *Leiurus quinquestriatus*, *Mesobuthus eupeus*, *M. nigrocinctus*), one species of Iuridae (*Calchas nordmanni*), and one species of Scorpionidae (*Scorpio maurus*). The species *C. matthiesseni*, *M. eupeus*, *M. nigrocinctus*, *C. nordmanni* and *S. maurus* are recorded for the first time from the province. Furthermore, *C. matthiesseni* is found in the eastern Mediterranean region for the first time. In addition, a key to Kilis scorpion species is presented, ecological notes about these species are provided, and the scorpion fauna of Kilis is compared with that of Gaziantep.

Keywords: Fauna, Scorpions, Buthidae, Iuridae, Scorpionidae, Kilis, Turkey.

Introduction

Kilis is a province of Turkey located in the southern central part of the country along the Syrian border. Kilis Province was a southern part of the province of Gaziantep and became an independent province since 1994. It comprises the southern foothills of the Taurus Mountains west of the Euphrates River and the northern edge of the Syrian Plain. Western and middle parts of Kilis are located in the eastern Mediterranean region while the eastern part of Kilis is located in the southeast Anatolian region.

During the last 50 years, few studies have been carried out and summarized the data of the distributional and biogeographical patterns of the scorpion species which inhabit the Mediterranean region and the southeast Anatolian region (Birula, 1917;

Vachon, 1947, 1951, 1971; Tolunay, 1959; Tulga, 1960; Kinzelbach, 1975, 1980, 1982, 1984, 1985; Levy & Amitai, 1980; Vachon & Kinzelbach, 1987; Kovařík, 1996; Crucitti, 1993, 1998, 1999, 2003; Crucitti & Cicuzza, 2000, 2001; Karataş, 2001; Crucitti & Vignoli, 2002; Karataş & Karataş, 2003; Yağmur, 2005). Few geographical records were the result of scientific expeditions to Kilis Province (Kinzelbach, 1984; Karataş, 2001).

Kilis, Gaziantep and Adıyaman are very important provinces because of the overlapping of the ecogeographic and climatic zones of the Mediterranean region and the southeast Anatolian region of Anatolia. The analysis of the scorpion pattern of these two regions gives an idea to understand the distributional patterns of the Middle East scorpion fauna (Vachon & Kinzelbach, 1987).

The purpose of this study is to introduce the scorpion species which live in Kilis Province as a contribution increasing our knowledge of Turkish scorpion fauna.

Material and Methods

Field work was achieved between 7th April and 29th July 2006. We have collected and examined 60 specimens from 17 different localities in Kilis Province (Figs. 1, 3-7, 9). Scorpions were collected by hand from under stones during the day and with UV light at night between 20.00 – 24.00. All the material mentioned in this work is preserved in 70% alcohol and deposited in the private collection of Ersen Aydın Yağmur (PCEAY). The specimens were identified using an Ivymen ZO2 stereomicroscope.

Results

Five species of family Buthidae and one species of each of family Iuridae and family Scorpionidae were identified. These species can be identified by the following key. *Mesobuthus gibbosus* was not collected from Kilis but it is included in the key because of its near affinity to the collected *Mesobuthus* species.

A key to Kilis scorpion species

1. Sternum triangular, pedipalp patella without ventral trichobothria Buthidae ... 3
- Sternum pentagonal, pedipalp patella with ventral trichobothria 2
2. Manus of pedipalp very broad and about as wide as long, pedipalp patella with three ventral trichobothria Scorpionidae, *Scorpio maurus*
- Manus longer than wide, pedipalp patella with one ventral trichobothrium Iuridae, *Calchas nordmanni*
3. Movable finger of pedipalp with three principal distal granules and one terminal granule *Androctonus crassicauda*
- Movable finger of pedipalp with four principal distal granules and one terminal granule 4
4. First two segments of mesosoma with five keels *Leiurus quinquestriatus*
- First two segments of mesosoma with three keels 5
5. Manus of pedipalp narrow, tergal crests of mesosoma exceed posterior margin of tergites, ventrolateral carinae of metasomal segment V without posterior granules enlarged *Compsobuthus matthiesseni*

- . Manus of pedipalp broad, tergal crests of mesosoma do not exceed posterior margin of tergites, ventrolateral carinae of metasomal segment V with posterior granules enlarged, often lobate *Mesobuthus* ... 6
6. Fourth segment of metasoma with ten keels 7
- . Fourth segment of metasoma with eight keels *Mesobuthus eupeus*
7. Fixed finger of pedipalp with 12 oblique granular rows; 13 on movable finger, chela slender [length/width: 5.52 ± 0.35 in males and 5.10 ± 0.39 in females (vid. Yağmur, 2005)] *Mesobuthus nigrocinctus*
- . Fixed finger of pedipalp with 11 oblique granular rows; 12 on movable finger, chela coarse [length/width: 4.49 ± 0.09 in males and 4.56 ± 0.09 in females (vid. Yağmur, 2005)] *Mesobuthus gibbosus*

Family Buthidae C.L. Koch, 1837

Androctonus crassicauda (Olivier, 1807)

Scorpio crassicauda Olivier, 1807

Type Locality: Kashan, Iran.

Androctonus crassicauda Vachon, 1948

Synonyms:

Buthus crassicauda Simon, 1872

Prionurus crassicauda Pocock, 1895

Buthus (Prionurus) crassicauda Birula, 1896

Buthus (Prionurus) crassicauda crassicauda Birula, 1896

Examined material and stations: 2♂♂, 1♀. Akıncı (Seve) Village, Central District, ca. 36°41'N 37°15'E, 28.v.2006, E.A. Yağmur.

Comments: This species is known from Armenia, Azerbaijan, Bahrain, Egypt (Sinai), Iran, Iraq, Israel, Jordan, Kuwait, Oman, Saudi Arabia, Syria, Turkey, United Arab Emirates and Yemen (Fet & Lowe, 2000; Hendrixson, 2006). It was reported from Diyarbakır (Vachon, 1947), Elazığ, Malatya, Mardin, Şanlıurfa (Vachon, 1951), İçel (Tolunay, 1959), Adıyaman (Crucitti, 1999; Crucitti & Cicuzza, 2001), Kilis (Karataş, 2001), Gaziantep (Yağmur, 2005). *A. crassicauda* was found only in one locality south of Kilis Province (Fig. 1), while Karataş (2001) recorded it from Kilis without definite locality. Yağmur (2005) stated that this species penetrated into middle and eastern part of Gaziantep Province and said that no specimen was collected from the part of province that belongs to the eastern Mediterranean region. The distributional characteristics are similar to Kilis and Gaziantep.

Ecological Notes: This species was generally described as a xerophilic species. According to Amr & Abu Baker (2004), it is a desert adapted species. It has been collected near and inside the village and even in barns, cattle sheds and rooms of farmhouses so it is a strongly anthropotolerant species. The observations and collecting material show us that this species do not live sympatrically with other species, while Yağmur (2005) recorded it with *C. matthiesseni* and *S. maurus* in the same habitat and reported that lowest activity temperature registered for it, in the air, was 15°C.

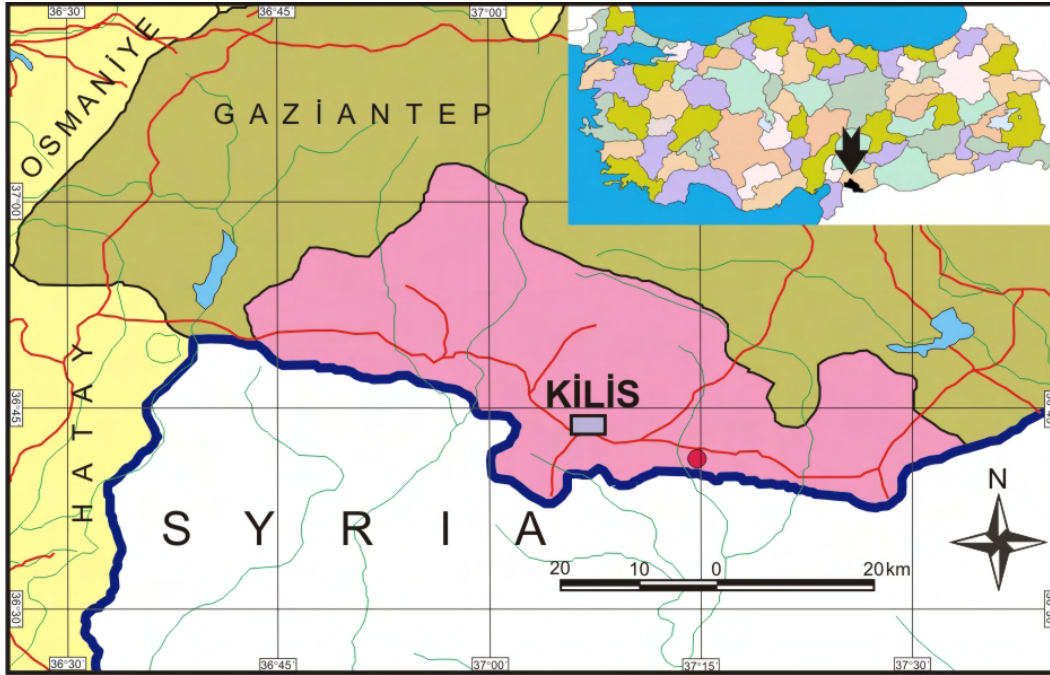


Fig. 1. Map showing *Androctonus crassicauda* specimens' locality in Kilis Province: Akıncı (Seve) Village.

***Compsobuthus matthiesseni* (Birula, 1905)**

Buthus acutecarinatus matthiesseni Birula, 1905

Type Locality: Qum, Markazi Province, Iran.

Compsobuthus matthiesseni Vachon, 1949

Synonyms:

Buthus acutecarinatus matthiesseni Birula, 1910

Buthus acutecarinatus Táborský, 1934

Compsobuthus acutecarinatus matthiesseni Kinzelbach, 1985

Examined material and stations: 2♂♂, 4♀♀. 1♂; Central District, Çörtten Village, ca. 36°46'N 37°16'E, 29.iv.2006, E.A. Yağmur. 2♀♀; Musabeyli District, Hasancalı Village, 1 km west, ca. 36°54'N 36°46'E, 27.v.2006, E.A. Yağmur. 1♀; Central District, Konak Village fork in road, the road from Kilis to Gaziantep, 12th km, ca. 36°44'N 37°14'E, 22.iv.2006, E.A. Yağmur. 1♂; Musabeyli District, Küçükahmethöyüğü (Körahmet-höyüğü) Village, ca. 37°01'N 36°56'E, 28.v.2006, E.A. Yağmur. 1♀; Elbeyli District, Uzunali Village, 1.5 km northeast, ca. 36°41'N 37°26'E, 30.iv.2006, E.A. Yağmur.

Comments: *C. matthiesseni* (Fig. 2) is known from Iran, Iraq (Sissom & Fet, 1998), Turkey (Kovařík, 1996) and Syria (Kovařík, 2003). The first record of this species was presented by Kovařík (1996) from Diyarbakır. Then it was found in Adıyaman (Crucitti & Vignoli, 2002) and Gaziantep (Yağmur, 2005). This species is distributed in the middle, eastern, northeastern and southeastern parts of Gaziantep (Yağmur, 2005; Yağmur, unpublished data) but there isn't any record from the part that belongs to the eastern Mediterranean region of Gaziantep. *C. matthiesseni* is here recorded for the first time from the eastern Mediterranean region in Turkey (Fig. 3).



Fig. 2. A picture of *Compsobuthus matthiesseni*.

Ecological notes: It is usually found under stones in steppe areas or on stony ground covered with bushes where it coexist with *C. nordmanni*, *L. quinquestriatus*, *M. nigrocinctus* and *S. maurus*. According to Yağmur (2005), this species shares same habitat with *M. eupeus*, *L. quinquestriatus*, and he noted that lowest activity temperature was 13°C for it. The distributional characteristics of this species are similar in Kilis and Gaziantep.

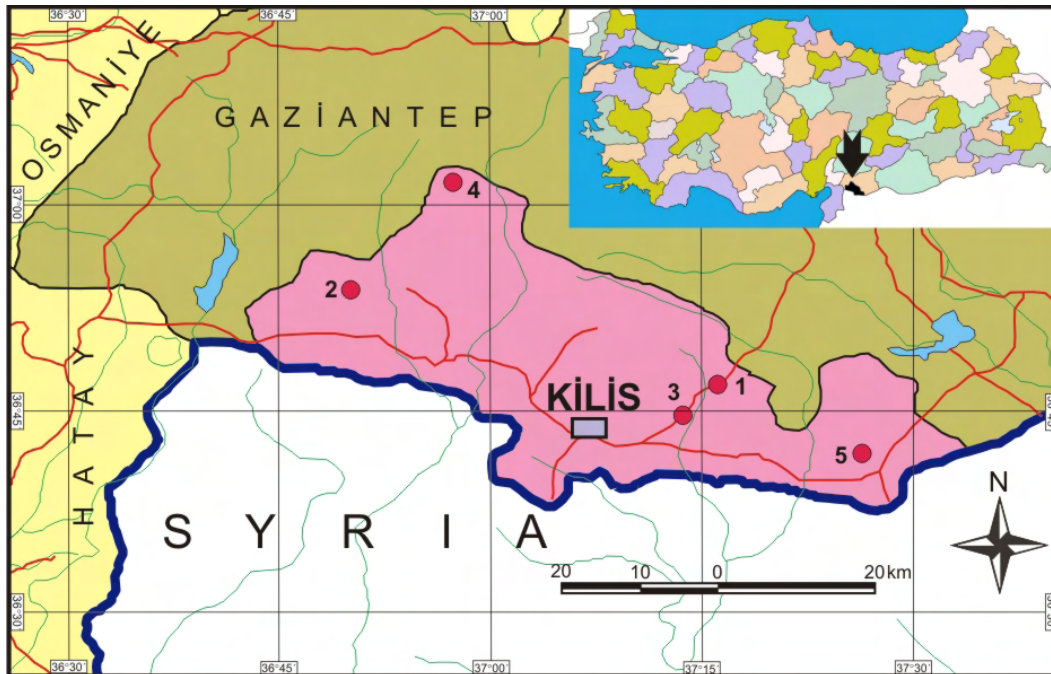


Fig. 3. Map showing *Compsobuthus matthiesseni* specimens' localities in Kilis Province: 1. Çörten Village, 2. Hasancalı Village, 1 km west, 3. Konak Village fork in road (the road from Kilis to Gaziantep, 12th km), 4. Küçükahmethöyüğü Village and 5. Uzunali Village 1.5 km northeast.

***Leiurus quinquestriatus* (Ehrenberg, 1828)**

Androctonus (Leiurus) quinquestriatus Ehrenberg in Hemprich & Ehrenberg, 1828

Type Locality: Upper Egypt and Sinai, Egypt.

Leiurus quinquestriatus Vachon, 1949

Synonyms:

Androctonus (Leiurus) quinquestriatus brachycentrus Ehrenberg in Hemprich & Ehrenberg, 1829

Androctonus (Liurus) quinquestriatus aculeatus Ehrenberg in Hemprich & Ehrenberg, 1831

Androctonus troilus C.L. Koch, 1839

Buthus beccarii Simon, 1882

Buthus voelschowi Werner, 1902

Buthus quinquestriatus libycus Birula, 1908

Examined material and stations: 3♂♂, 13♀♀. 2♀♀; Musabeyli District, Aşağı Kalecik Village, ca. 36°56'N 37°01'E, 22.iv.2006, E.A. Yağmur. 1♀; Elbeyli District, 1.5 km south, ca. 36°39'N 37°28'E, 30.iv.2006, E.A. Yağmur. 2♀♀; Musabeyli District, Hasancalı Village, 1 km west, ca. 36°54'N 36°46'E, 27.v.2006, E.A. Yağmur. 1♀; Musabeyli District, Hasancalı-Yedigöz Villages fork in road, ca. 36°52'N 36°48'E, 27.v.2006, E.A. Yağmur. 3♂♂, 6♀♀; Central District, Küplüce Village, 1 km east, ca. 36°43'N 37°13'E, 29.iv.2006, E.A. Yağmur. 1♀; Musabeyli District, Yuvabaşı Village, 1 km east, ca. 36°52'N 36°57'E, 22.iv.2006, E.A. Yağmur.

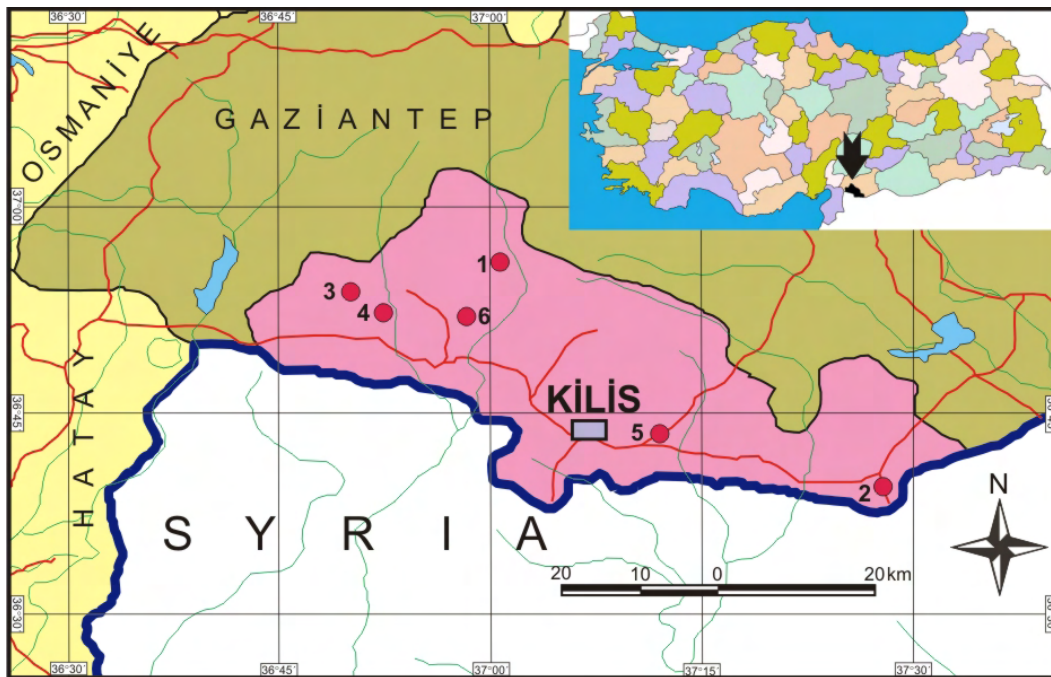


Fig. 4. Map showing *Leiurus quinquestriatus* specimens' localities in Kilis Province: 1. Aşağı Kalecik Village, 2. Elbeyli 1.5 km south, 3. Hasancalı Village, 1 km west, 4. Hasancalı-Yedigöz Villages fork in road, 5. Küplüce Village, 1 km east and 6. Yuvabaşı Village, 1 km east.

Comments: *L. quinquestriatus* is known from Algeria, Chad, Egypt, Ethiopia, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mali, Niger, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates and Yemen (Fet & Lowe, 2000). This species was recorded for the first time from Turkey (Adıyaman) by Tulga (1960). Additional records were given from Hatay (Kinzelbach, 1984, Karataş, 2001), Kilis (Kinzelbach, 1984), Mardin (Crucitti & Vignoli, 2002) and Gaziantep (Yağmur, 2005). This species is quite common in the southeastern Anatolian region. Few localities were reported in the eastern Mediterranean region (Kinzelbach, 1984, Karataş, 2001, Yağmur, 2005). The distributional characteristics of this species are similar in Kilis and Gaziantep (Fig. 4).

Ecological notes: The specimens were collected from under stones among steppe vegetation or on stony ground covered with bushes. *C. matthiesseni*, *M. nigrocinctus* and *S. maurus* are inhabitants with *L. quinquestriatus* in the same area. According to Yağmur (2005), *C. matthiesseni*, *M. eupeus*, *M. nigrocinctus* and *S. maurus* live within the same habitat patch with *L. quinquestriatus*. He recorded that lowest surface activity temperature was 13°C and vertical distribution was up to 1225 m.

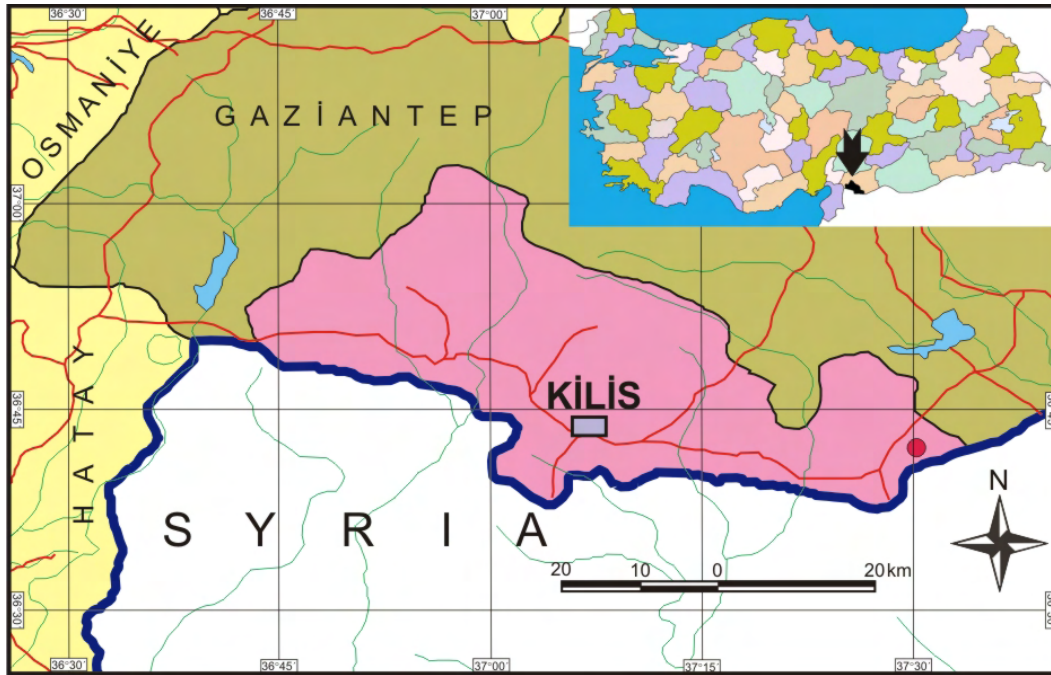


Fig. 5. Map showing *Mesobuthus eupeus* specimens' locality in Kilis Province: Çangallı Village.

Mesobuthus eupeus (C.L. Koch, 1839)

Androctonus eupeus C.L. Koch, 1839

Type Locality: Caucasus.

Mesobuthus eupeus Vachon, 1950

Synonyms:

Androctonus thersites C.L. Koch, 1839

Androctonus ornatus Nordmann, 1840

Androctonus cognatus L. Koch, 1878

Buthus afghanus Pocock, 1889

Buthus phillipsii Pocock, 1889

Buthus pachysoma Birula, 1900

Examined material and stations: 3♂♂, 2♀♀. Elbeyli District, Çangallı Village, ca. 36°43'N 37°31'E, 20.iv.2006, E.A. Yağmur.

Comments: *M. eupeus*, is known from Afghanistan, Armenia, Azerbaijan, China, Georgia, Iran, Iraq, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Russia (Province of Astrakhan), Syria, Tajikistan, Turkey, Turkmenistan and Uzbekistan (Fet & Lowe, 2000). This species is spread over most of the eastern Anatolian region (Artvin, Kars, Erzurum, Ağrı, Kars, Van), all parts of the southeastern Anatolian region (Birula, 1917; Crucitti, 1993, 1999; Crucitti & Cicuzza 2000, 2001; Crucitti & Vignoli, 2002), Central Anatolia (Kayseri, Nevşehir and Niğde) (Karataş & Karataş, 2003) and The Aegean Region (Akhisar/Manisa) (Teruel, 2002). The limit of *M. eupeus* is Gaziantep in the southeastern Anatolian region (Fet & Braunwalder, 2000). The present study gives the first record of *M. eupeus*, found east of Kilis Province (Fig. 5). It was already recorded from central, eastern and northeastern parts of Gaziantep (Yağmur, 2005).

Ecological notes: *M. eupeus* is collected from steppe and stony area near an agricultural field. No other species was recorded from the same habitat with *M. eupeus*. Yağmur (2005) reported this species with *C. nordmanni*, *C. matthiesseni*, *L. quinquestriatus*, *M. nigrocinctus* and *S. maurus* in the same habitat and noted that surface lowest activity temperature was 8°C for it.

***Mesobuthus nigrocinctus* (Ehrenberg, 1828)**

Androctonus (Prionurus) nigrocinctus Ehrenberg in Hemprich & Ehrenberg, 1828

Type Locality: Beirut, Lebanon.

Mesobuthus nigrocinctus Fet et. al., 2000

Synonyms:

Buthus nigrocinctus Simon, 1872

Buthus gibbosus (part) Kraepelin, 1891

?*Mesobuthus* sp. Kinzelbach, 1984

?*Mesobuthus gibbosus* ssp. (?) Kinzelbach, 1985

?*Mesobuthus* sp. Kabakibi et.al., 1999

Examined material and stations: 9♂♂, 9♀♀, 2 juveniles. 1♂, 2♀♀; Musabeyli District, Aşağı Kalecik Village, ca. 36°56'N 37°01'E, 22.iv.2006, E.A. Yağmur. 1♀; Musabeyli District, Çınar Village, ca. 37°00'N 36°59'E, 29.vii.2006, E.A. Yağmur. 5♂♂, 4♀♀, 1 juvenile; Central District, Çörten Village, ca. 36°46'N 37°16'E, 27.v.2006, E.A. Yağmur. 1♂, 1♀, 1 juvenile; Musabeyli District, Hüseyinoğlu Village, ca. 36°56'N 36°56'E, 22.iv.2006, E.A. Yağmur. 1♂; Central District, Konak Village fork in road, the road from Kilis to Gaziantep, 12th km, ca. 36°44'N 37°14'E, 22.iv.2006, E.A. Yağmur. 1♂; Musabeyli District Küçükahmethöyüğü (Körahmethöyüğü) Village, ca. 37°01'N 36°56'E, 28.v.2006, E.A. Yağmur. 1♀; Central District, Küplüce Village, 1 km east, ca. 36°43'N 37°13'E, 29.vi.2006, E.A. Yağmur.

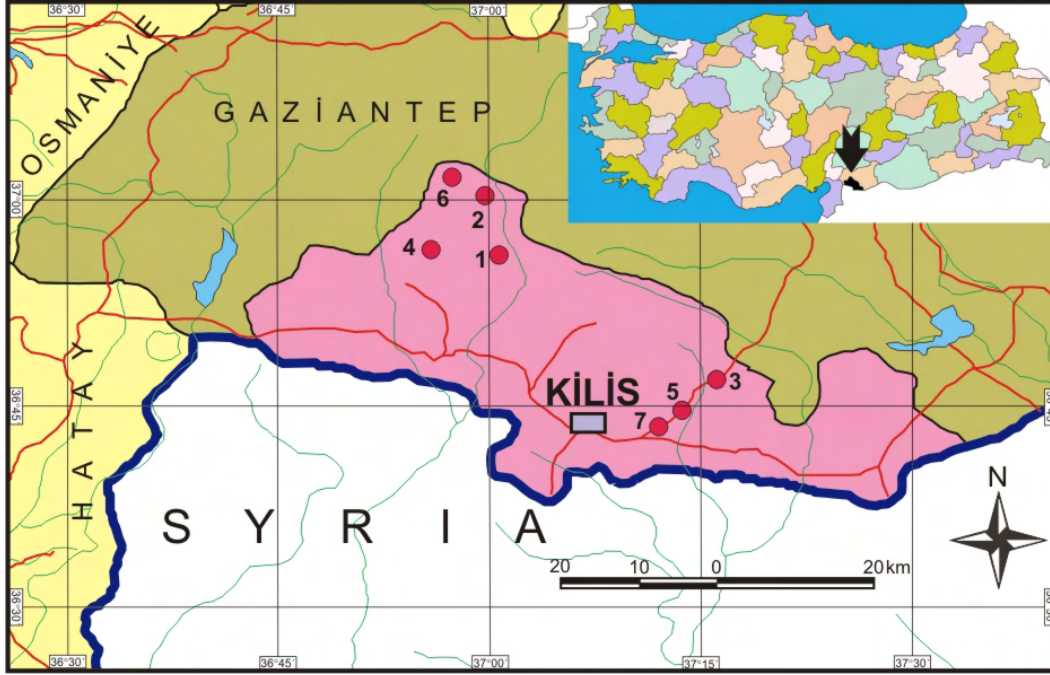


Fig. 6. Map showing *Mesobuthus nigrocinctus* specimens' localities in Kilis Province: 1. Aşağı Kalecik Village, 2. Çınar Village, 3. Çörtten Village, 4. Hüseyinoğlu Village, 5. Konak Village fork in road (the road from Kilis to Gaziantep, 12th km), 6. Küçükahmethöyüğü (Körahmethöyüğü) Village and 7. Küplüce Village, 1 km east.

Comments: *M. nigrocinctus* was described for the first time from Lebanon by Ehrenberg (Hemprich & Ehrenberg, 1828). It was recently recorded from Israel (Fet *et al.*, 2000) and Turkey (Crucitti & Vignoli, 2002) from Adıyaman and Hatay Provinces. Afterwards, Yağmur (2005) recorded this species from Gaziantep, and more recent findings of it from middle, east, north and south-west of Gaziantep were reported. He suggested that *Mesobuthus gibbosus* is distributed west and north-west of Gaziantep. Our record is the first time from Kilis. In spite of the record of Crucitti & Vignoli (2002) of *M. gibbosus* from one locality of Gaziantep, southeast Anatolia, Yağmur (2005) stated that only *M. eupeus* and *M. nigrocinctus* occur at the same area, and that there is no other *Mesobuthus* species distributed in southeast Anatolia. Also, both *M. eupeus* and *M. nigrocinctus* were recently found from the same area (Yağmur, unpublished data). The zoogeographical distribution and present findings of *M. nigrocinctus* in Kilis Province support Yağmur's (2005) findings (Fig. 6).

Ecological notes: The specimens were collected by turning rocks, under stones in the scarce vegetation of oak forested area or in the mountainous area with scarce vegetation. According to Yağmur (2005) and present study, the distribution of *M. nigrocinctus* is allopatric with *M. gibbosus* and sympatric with *M. eupeus*. Fet *et al.* (2000) and Varol *et al.* (2006) noted that this species was sympatrically found with *S. maurus* and *Compsobuthus schmiedeknechti*. Similarly, *M. nigrocinctus* was syntopically found with *C. matthiesseni*, *L. quinquestriatus* and *S. maurus*. Yağmur (2005), in his studies in Gaziantep Province, emphasized that *C. nordmanni*, *L. quinquestriatus* and *S. maurus* were predominantly found with *M. nigrocinctus* in the same area. Fet *et al.* (2000) appended notes on vertical distribution of *M. nigrocinctus* between 1300-1700 m, and

Yağmur (2005) gave a detail that surface lowest activity temperature was 13°C for this species.

Family Iuridae Thorell, 1876

***Calchas nordmanni* Birula, 1899**

Calchas nordmanni Birula, 1899

Type Locality: Ardanuch, Artvin, Turkey.

Synonyms:

Chactas nordmanni Mello-Leitão, 1942

Paraiurus nordmanni Vachon & Kinzelbach, 1987

Examined material and stations: 4♀♀. 2♀♀; Elbeyli District, Çanak Village, Sekizler Village fork in road, 1 km west, ca. 36°40'N 37°22'E, 30.iv.2006, E.A. Yağmur. 2♀♀; Elbeyli District, Uzunali Village, 1.5 km northeast, ca. 36°41'N 37°26'E, 22.iv.2006, E.A. Yağmur.

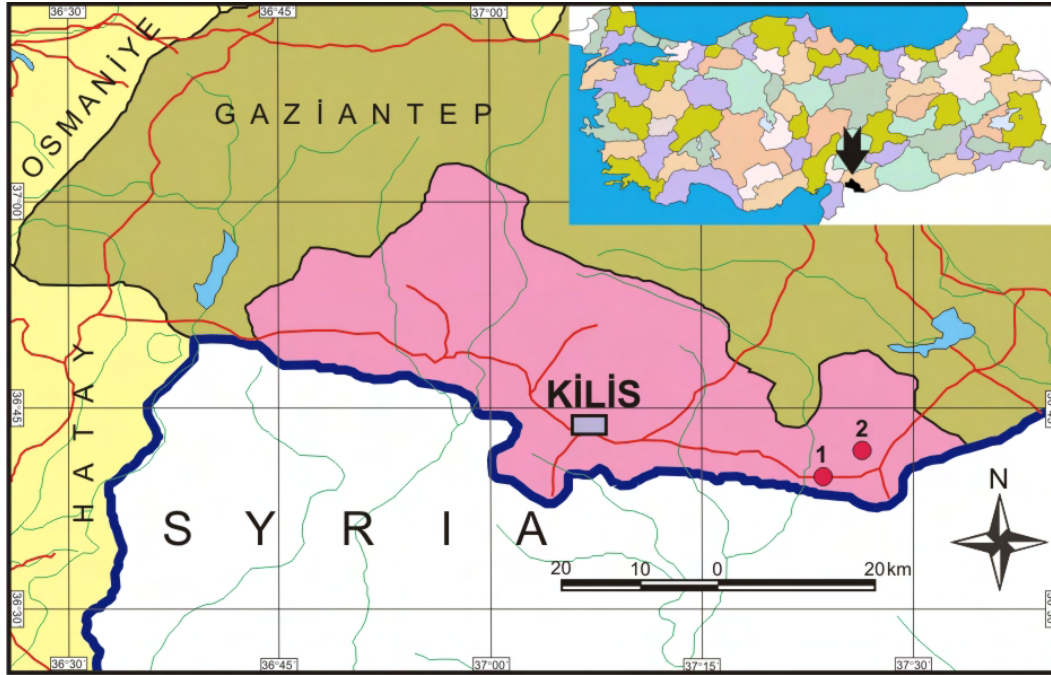


Fig. 7. Map showing *Calchas nordmanni* specimens' localities in Kilis Province: 1. Çanak Village (Sekizler fork in road) 1 km west and 2. Uzunali Village 1.5 km northeast.

Comments: *C. nordmanni* was originally described from Artvin (Çoruh Vadisi) (Birula, 1899). Then, this species was collected from Erzurum, Antalya, Siirt (Kinzelbach, 1980, 1982), Diyarbakır, Elazığ, Batman, Siirt, Şırnak, Hakkâri, Şanlıurfa (Vachon & Kinzelbach, 1987), Samos Isl. (Sissom, 1987), Megisti Isl., Malatya ve Hatay, Halfeti (Şanlıurfa), Nemrut Mountain (Adıyaman) (Fet & Braunwalder, 2000), Bilecik (Francke & Söleğlad, 1981) and Gaziantep (Yağmur, 2005). This species is spread in central and eastern parts of Gaziantep (Yağmur, 2005; Yağmur, unpublished data). The distributional characteristics of this species is similar in Kilis and Gaziantep (Fig. 7).



Fig. 8. A picture of *Calchas nordmanni*.

Ecological notes: This species is endemic to some of Greek Islands (near western and southern coastal borders of Turkey) and Turkey. This represents a small population with limited distribution. *C. nordmanni* is usually found under stones in steppe vegetation, covered with basalt stones (Fig. 8). This scorpion's niche is overlapping with *C. matthiesseni*. Yağmur (2005) recorded the coexistence of *M. eupeus*, *M. nigrocinctus* and *S. maurus* in the same habitat and that vertical distribution of *C. nordmanni* was up to 1000 m.

Family Scorpionidae Latreille, 1802

Scorpio maurus Linnaeus, 1758

Scorpio maurus Linnaeus 1758

Type Locality: Africa.

Synonyms:

Buthus (Heterometrus) palmatus Ehrenberg in Hemprich & Ehrenberg, 1828

Buthus testaceus C.L. Koch, 1838

Heterometrus propinquus Simon, 1872

Heterometrus arabicus Pocock, 1900

Heterometrus townsendi Pocock, 1900

Heterometrus fuliginosus Pallary, 1928

Examined material and stations: 4 ♂♂, 1 ♀, 1 juvenile. 1 juvenile; Polateli District, Belenözü (Ravanda) Village, 2 km north, ca. 36°48'N 37°05'E, 07.iv.2006, E.A. Yağmur. 1 ♀; Central District, Çörten Village, ca. 36°46'N 37°16'E, 29.iv.2006, E.A. Yağmur. 1 ♂; Central District, Gözkaya Village, 1 km northwest, ca. 36°50'N 36°48'E, 27.v.2006, E.A. Yağmur. 2 ♂♂; Musabeyli District, Hasancalı Village, 1 km west, ca. 36°54'N 36°46'E, 27.v.2006, E.A. Yağmur. 1 ♂; Musabeyli District, Küçükahmethöyüğü (Körahmet-höyüğü) Village, ca. 37°01'N 36°56'E, 28.v.2006, E.A. Yağmur.

Comments: *S. maurus* is spread in North Africa, Middle East and Arabian Peninsula. This species is known from Elazığ to Mersin and to the Amanos Mountains (Levy & Amitai, 1980). Kinzelbach (1985) indicated on the map that this species exhibited wide spread in Mersin, Adana, Hatay, Gaziantep, Kilis, Adıyaman, Şanlıurfa, Diyarbakır, Batman, Siirt, Bitlis, Van, Hakkâri, Şırnak and Mardin. But he did not record any locality from Kilis Province. According to Crucitti & Vignoli (2002), this species occurs in Mersin, Adana, Hatay in the eastern Mediterranean region; nevertheless it is under suspect in Kahramanmaraş; and well known in Adıyaman, Gaziantep, Şanlıurfa, Diyarbakır and Mardin in southeast Anatolia. We suggested that *S. maurus* is spread all over Kilis Province, and Yağmur (2005) also stated that this species is spread all over Gaziantep (Fig. 9).

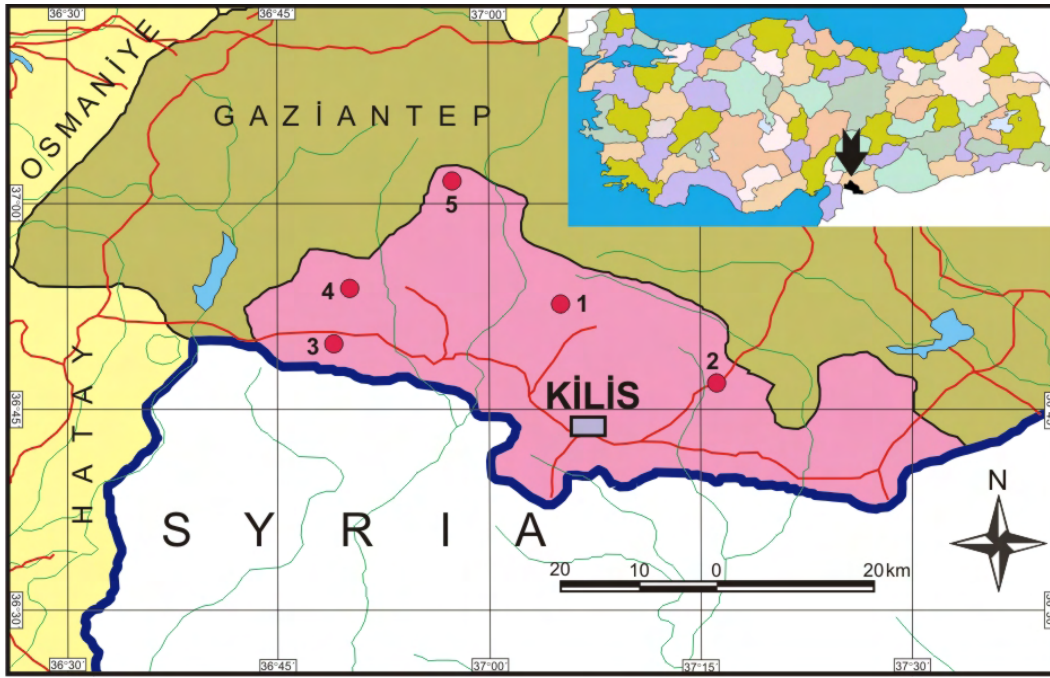


Fig. 9. Map showing *Scorpio maurus* specimens' localities in Kilis Province: 1. Belenözü (Ravanda) Village, 2 km north, 2. Çörten Village, 3. Gözkaya Village, 1 km northwest, 4. Hasancalı Village, 1 km west and 5. Küçükahmethöyüğü (Körahmethöyüğü) Village.

Ecological notes: This species is fossorial and constructs its burrow under stones. It was collected from under stones in steppe vegetation where sparse, dense or without oak forested area. Warburg (1997) stated that, this oakwook scorpionid, formerly the most abundant scorpion in the Mediterranean region, showed a marked decline in numbers. *S. maurus* is collected with *C. matthiesseni*, *L. quinquestriatus* and *M. nigrocinctus* in the same habitat. Yağmur (2005) reported that *C. nordmanni*, *L. quinquestriatus*, *M. eupeus*, *M. gibbosus* and *M. nigrocinctus* coexist with *S. maurus*. Vertical distribution of *S. maurus* was reported up to 1600 m (Karataş, 2001) and lowest surface activity temperature registered was 8°C (Yağmur, 2005).

Discussion

The Kilis material includes 60 specimens that belong to seven species: *A. crassicauda*, *C. nordmanni*, *C. matthiesseni*, *L. quinquestriatus*, *M. eupeus*, *M.*

nigrocinctus and *S. maurus*. Kilis Province has rich scorpion fauna that includes seven of 17 species [*Androctonus crassicauda*, *Calchas nordmanni*, *Compsobuthus matthiesseni*, *Euscorpis carpathicus*, *E. italicus*, *E. mingrelicus*, *E. tergestinus*, *Iurus dufourei*, *Scorpio asiaticus*, *Leiurus quinquestriatus*, *Mesobuthus caucasicus*, *M. eupeus*, *M. gibbosus*, *Scorpio maurus fuscus* (Fet et al., 2000), *Buthacus macrocentrus*, *Hottentotta saulcyi*, *Mesobuthus nigrocinctus* (Crucitti & Vignoli, 2002), *Compsobuthus schmiedeknechti* (Varol et al., 2006)] of Turkish scorpions.

The most venomous scorpion, *L. quinquestriatus* (16 specimens) [with LD₅₀ = 0.25 mg/kg (Simard & Watt, 1990)] and *M. nigrocinctus* (20 specimens) were very common in the province. We also found another venomous scorpion, *A. crassicauda* [with LD₅₀ = 0.40 (Simard & Watt, 1990)], only 3 specimens in the study area. Observations indicated that *L. quinquestriatus* prefers to live far away from the human settlements. On the contrary, *A. crassicauda* enters the farmhouses and barns. Similarly, *M. nigrocinctus* and *M. eupeus* were found near or inside the human settlements too. Both *L. quinquestriatus* and *A. crassicauda* are dangerous for human life. It is interesting that *M. gibbosus* could not be found in Kilis Province despite a few researchers collected it in the neighbour province Gaziantep (Crucitti & Vignoli, 2002; Yağmur, 2005) and Hatay (Karataş, 2001).

Considering distributional affinities of the genera, genus *Mesobuthus* has Central Asian-Balkan range and genus *Calchas* has Aegean-Anatolian range while the genera *Androctonus*, *Compsobuthus*, *Leiurus* and *Scorpio* have Saharo-Sindian distribution. Since Kilis is situated in the southeastern Anatolian transitional region, the scorpiofauna of this area is a mixture of the species with different zoogeographical origin. Therefore, Kilis has rich scorpion fauna relatively more than other provinces of Turkey.

C. nordmanni, *C. matthiesseni*, *M. eupeus*, *M. nigrocinctus* and *S. maurus* are reported in this study as new geographical records for Kilis Province.

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References

- Amr, Z.S. & Abu Baker, M. 2004. The Scorpions of Jordan. *Denisia 14*, zugleich *Kataloge der OÖ. Landesmuseen Neue Serie*, 2: 237-244.
- Birula, A.A. 1899. [A new species of scorpions for the Russian fauna]. *Annuaire du Musée Zoologique de l'Académie Impériale des Sciences de St. Pétersbourg*, 4: XIV–XV [in Russian, Latin diagnosis].
- Birula, A.A. 1917. Arthrogastric Arachnids of Caucasia, I: Scorpions, *Ann. Caucasian Museum*, Tiflis, A(5), 253 pp. [in Russian], English translation by J. Salkind, Edited by E. Rabinovitz. *Israel Program for Scientific Translation*, No. 1206, Jerusalem, 1964, v+170 pp.
- Crucitti, P. 1993. Some topics on distribution patterns of the Genus *Mesobuthus* in the Near East based on ecological data (Scorpiones: Buthidae). *Biologia Gallo Hellenica*, 20 (1): 69-74.

- Crucitti, P. 1998. The scorpions of Anatolia: Biogeographical patterns (Scorpiones). *XXXI Congresso Società Italiana di Biogeografia dell'Anatolia Roma*, 29-31 Ottobre 1998, 34 pp.
- Crucitti, P. 1999. The scorpions of Anatolia: Bio-geographical patterns. *Biogeographica*, 20: 81-94.
- Crucitti, P. 2003. Ricerche bio-ecologiche su *Androctonus crassicauda* nell'Anatolia sud-orientale. *Boll. Soc. entomol. ital.*, 135(1): 3-14.
- Crucitti, P. & Cicuzza, D. 2000. Gli Scorpioni del Parco Nazionale del Monte Nemrut (Turchia sud-orientale) (Scorpiones). *Mem. Soc. entomol. ital.*, 78(2): 275-294.
- Crucitti, P. & Cicuzza, D. 2001. Scorpions of Anatolia: ecological patterns. pp. 225-234. In: V. Fet & P.A. Selden (eds.), *Scorpions 2001, In Memoriam Gary A. Polis*. British Arachnological Society, Burnham Beeches, Bucks.
- Crucitti, P. & Vignoli, V. 2002. Gli scorpioni (Scorpiones) dell'Anatolia sud-orientale (Turchia). *Bollettino del Museo Regionale di Scienze naturali*, Torino, 19(2): 433-480.
- Fet, V. & Braunwalder, M.E. 2000. The scorpions (Arachnida: Scorpiones) of the Eastern Mediterranean area: Current problems in taxonomy and biogeography. *Belgium Journal of Zoology*, 130(1): 15-20.
- Fet, V., Hendrixson, B.E., Sissom, W.D. & Levy, G. 2000. First record for the genus *Mesobuthus* Vachon, 1950 in Israel: *Mesobuthus nigrocinctus* (Ehrenberg, 1828), n. comb. (Scorpiones: Buthidae) from Mt. Hermon. *Israel Journal of Zoology*, 46(4): 287-295.
- Fet, V. & Lowe, G. 2000. Family Buthidae. pp. 54-286. In: Fet, V., Sissom, W.D., Lowe, G. & Braunwalder, M.E. *Catalog of the Scorpions of the World (1758-1998)*. The New York Entomological Society, New York, 690 pp.
- Francke, O.F. & Soleglad M.E. 1981. The Family Iuridae Thorell, 1876 (Arachnida, Scorpiones). *Journal of Arachnology*, 9: 233-258.
- Hemprich, F.W. & Ehrenberg, C.G. 1828. Zoologica II. Arachnoidea. Plate I: *Buthus*, Plate II: *Androctonus*. In: C.G. Ehrenberg, *Symbolae physicae seu icones et descriptiones animalium evertetorum sepositis insectis quae ex itinere per Africam borealem et Asiam occidentalem*. Officina Academica, Berlin.
- Hendrixson, B.E. 2006. Buthid scorpions of Saudi Arabia, with notes on other families (Scorpiones: Buthidae, Liochelidae, Scorpionidae). *Fauna of Arabia*, 21: 33-120.
- Karataş, A. 2001. Doğu Akdeniz Akrep (Scorpiones) Faunası. *Ege Üniversitesi, Fen Bilimleri Enstitüsü*, Doktora Tezi, 93s., İzmir.
- Karataş, A. & Karataş, A. 2003. *Mesobuthus eupeus* (C.L. Koch, 1839) (Scorpiones: Buthidae) in Turkey. *Euscorpius*, 7: 1-6.
- Kinzelbach, R. 1975. Die Skorpione der Ägäis: Beiträge zur Systematik, Phylogenie und Biogeographie. *Zoologische Jahrbücher, Abteilung für Systematik*, 102(1): 12-50.
- Kinzelbach, R. 1980. Zur Kenntnis des Kaukasischen Skorpions *Calchas nordmanni* Birula, 1899 (Scorpionida: Chactidae). *Verh. naturwiss. Ver. Hamburg, (NF)* 23: 169-174.
- Kinzelbach, R. 1982. Die Skorpionssammlung des Naturhistorischen Museums der Stadt Mainz, - Teil I: Europa und Anatolien. *Mainzer Naturw. Archiv*, 20: 49-66.
- Kinzelbach, R. 1984. Die Skorpionssammlung des Naturhistorischen Museums der Stadt Mainz, - Teil II: Vorderasien. *Mainzer Naturw. Archiv*, 22: 97-106.
- Kinzelbach, R. 1985. Vorderer Orient. Skorpione (Arachnida: Scorpiones). *Tübinger Atlas der Vorderer Orients (TAVO)*, Karte Nr. A VI 14.2.

- Kovařík, F. 1996. First report of *Compsobuthus matthiesseni* (Scorpiones: Buthidae) from Turkey. *Klapalekiana*, 32: 53-55.
- Kovařík, F. 2003. Eight new species of *Compsobuthus* Vachon, 1949 from Africa and Asia (Scorpiones: Buthidae). *Serket* 8(3): 87-112.
- Levy, G. & Amitai, P. 1980. *Scorpiones. Fauna Palaestina, Arachnida I*. The Israel Academy of Sciences and Humanities, Jerusalem 130 pp.
- Simard, J.M. & Watt, D.D. 1990. Venoms and toxins. pp. 414-444 In: Polis, G.A. (ed.). *The Biology of Scorpions*. Stanford University Press, Stanford, California.
- Sissom, W.D. 1987. First record of the Scorpion *Paraiurus nordmanni* (Birula, 1899) (Scorpiones, Iuridae) in Greece. *Journal of Arachnology*, 15(2): 272.
- Sissom, W.D. & Fet, V. 1998. Redescription of *Compsobuthus matthiesseni* (Scorpiones, Buthidae) from southwestern Asia. *Journal of Arachnology*, 26(1): 1-8.
- Teruel, R. 2002. First record of *Mesobuthus eupeus* (Koch, 1839) from western Turkey (Scorpiones: Buthidae). *Revista Ibérica de Aracnología*, 5: 75-76.
- Tolunay, M.A. 1959. Zur Verbreitung der Skorpione in der Türkei. *Zeitschrift für angewandte Entomologie*, 43(4): 366-370.
- Tulga, T. 1960. Türkiyede varlığı ilk defa tespit edilen bir akrep türü (*Buthus quinquestriatus*) ile *Prionurus crassicauda*'ya karşı hazırladığımız akrep serumları arasında çapraz proteksiyon deneyleri. *Türk İj. Tec. Biol. Derg.*, 20(1): 191-203.
- Vachon, M. 1947. Remarques préliminaires sur le faune des Scorpions de Turquie. *Bulletin du Muséum National d'Histoire Naturelle*, Paris, (2), 19(2): 161-164.
- Vachon, M. 1951. A propos de quelques Scorpions de Turquie collectés par M. le Professeur Dr. Curt Kosswig. *İstanbul Üniversitesi Fen Fakültesi Mecmuası*, 16(B): 341-344.
- Vachon, M. 1971. [Remarques sur le Scorpion caucasien *Calchas nordmanni* Birula (Scorpiones, Chactidae)]. *Entomologicheskoe Obozreniye (Revue d'Entomologie de l'URSS)*, 50(3): 712-718 (in Russian).
- Vachon, M. & Kinzelbach, R. 1987. On the taxonomy and distribution of the scorpions of the Middle East. pp. 91-103. In: F. Krupp, W. Schneider & R. Kinzelbach (eds.). *Proceedings of the Symposium on the Fauna and Zoogeography of the Middle East*, Mainz, 1985.
- Varol, İ., Yağmur, E.A., Özaslan, M. & Yalçın, M. 2006. A scorpion *Compsobuthus schmiedeknehti* (Scorpiones: Buthidae) new to the Turkish fauna. *Pakistan Journal of Biological Sciences*, 9(8): 1559-1562.
- Warburg, M.R. 1997. Biogeographic and demographic changes in the distribution and abundance of scorpions inhabiting the Mediterranean region in northern Israel. *Biodiversity and Conservation*, 6(10): 1377-1389.
- Yağmur, E.A. 2005. Gaziantep Akrepleri (Ordo: Scorpiones) ve Zoocoğrafik Dağılımları. *Gaziantep Üniversitesi, Fen Bilimleri Enstitüsü*, Yüksek Lisans Tezi, 136 s., Gaziantep.

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A seven-legged pholcid spider from Egypt (Araneida: Pholcidae)

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Abstract

The second seven-legged spider is here recorded. It belongs to family Pholcidae. This male *Artema atlanta* Walckenaer, 1837 was collected from Burg El-Arab, in the Mediterranean region north of Egypt.

Keywords: Spiders, Araneida, Pholcidae, Seven-legged, Egypt.

Among a collection of arthropods from the western area of the Mediterranean coast of Egypt made by Drs. A.H. Ali and T. Tantawi of the Faculty of Science of Alexandria University, I found a seven-legged pholcid male spider. It was collected from the area of El-Mallahat near Burg El-Arab, about 50 km west of Alexandria (30°55'36"N, 29°31'50"E, elevation 20m), on 19 September 1998, by Drs. A.H. Ali and T. Tantawi. It is now deposited in the Arachnid Collection of Egypt (ACE 19980919-01).

This specimen is identified as *Artema atlanta* Walckenaer, 1837, a pantropical pholcid species (Platnick, 2007) which is widely distributed in Egypt (El-Hennawy, 2006). It has four right legs and only three left legs. There is only one leg instead of the 1st and 2nd left legs (Fig.1).

The first recorded seven-legged spider was a female *Larinioides suspicax* (O.P.-Cambridge, 1876) of Family Araneidae (El-Hennawy, 2002). It was also collected from the Mediterranean region of Egypt. It had only three legs at the left side too.

This is the second case of a seven-legged spider which I could find in Egypt. There is no other published records of this kind until now.



Fig. 1. Seven-legged *Artema atlanta* male, dorsal view (left) and ventral view (right).

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I thank Drs. Abdel-Nasser H. Ali and Tarek Tantawi (Alexandria) who collected the examined pholcid specimen and made it available to me.

References

- El-Hennawy, H.K. 2002. A seven-legged araneid spider from Egypt (Araneida: Araneidae). *Serket*, 8(2): 84-85.
- El-Hennawy, H.K. 2006. A list of Egyptian spiders (revised in 2006). *Serket* 10(2): 65-76.
- Platnick, N.I. 2007. *The world spider catalog*, version 7.5. American Museum of Natural History, online at <http://research.amnh.org/entomology/spiders/catalog/index.html>